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Elmes ST50H, ST100H, ST200H installation manual

WINDOW ROLLER SHADES WIRELESS CONTROL SET WITH CODE-HOPPING SECURITY

ST50H- roller shades control set with up to 50 meters range (12V bat. 303 MHz)
ST100H - roller shades control set with up to 100 meters range (12V bat. 433,92MHz).
ST200H - roller shades control set with up to 200 meters range (9V bat. 433,92 MHz).

A set consists of 230VAC mains powered radio receiver and two 12V battery key-fob hand transmitters (ST50H/ST100H) or two 9V battery hand transmitters (ST200H) designed for wireless window roller shades control. Both the transmitter (encoder) and the receiver (decoder) use the *KEELOQ* ® code-hopping technology. The receiver is fully programmable and has two power relay outputs for connecting roller shades 230VAC motor up and down rotation supply lines to the 230VAC mains. The receiver features built in led that provides necessary programming status indication. Transmitters are with two different colour switches corresponding to up or down roller shades rotation.

The receiver features two user selected modes of operation set by jumper **1K/2K**:

Mode 1. (jumper 1K/2K closed) Each switch of the two channel hand transmitter is responsible for only one way start-stop rotation of the roller's motor. Example: red switch for up rotation and grey switch for down rotation only.

Mode 2. (jumper 1K/2K opened) Each switch of the two channel hand transmitter is pre-programmed to different receiver and operates in changing rotation/stop mode "up-stop-down-stop-up-, etc.". Example: one two channel hand transmitter controls two roller shades. With the use of four channel hand transmitter (Elmes CH4H) up to four rollers can be controlled this way.

Important! When mode 2 is selected, it is necessary to perform point 1 of programming procedures (see below) and assign the transmitter buttons to controlled rollers.

The receiver may be also wire controlled by the use of pulse type, two way, wall switch. Separate inputs are provided for "up" rotation and "down" rotation control and one common point.

Resetting the receiver's motor relays (stopping the motor) is done either by passing of programmed time-lapse period or by shorting the reset input RS to ground (COM).

IMPORTANT! Connecting 220-230VAC mains supply to the ST receiver requires live line wire to be connected to point "L" of the receiver while neutral line wire to point "N".

ST PROGRAMMING PROCEDURES

1. Programming - learning transmitter(s) to receiver's memory (max. 12):

a) press receiver's **PRG** switch for less than 3 seconds (led lights). Releasing the switch LED continues to light red indicating entering the programming procedure,
b) press any transmitter button twice and the receiver's LED switches off and starts blinking confirming end of the procedure. The transmitter is in receiver's memory.

2. Programming - setting the motor rotation time (receiver's relays reset):

a) press receiver's **PRG** switch for more than 3 and less than 8 seconds (led lights). Releasing the switch LED continues to light indicating entering this programming procedure,
b) pressing any hand transmitter switch to set the receiver's relay,
c) when required motor rotation time has lapsed (max. 60 minutes) press the hand transmitter switch again. The receiver's relay is reset and motor stops. After 2 seconds the led starts blinking confirming end of the procedure.

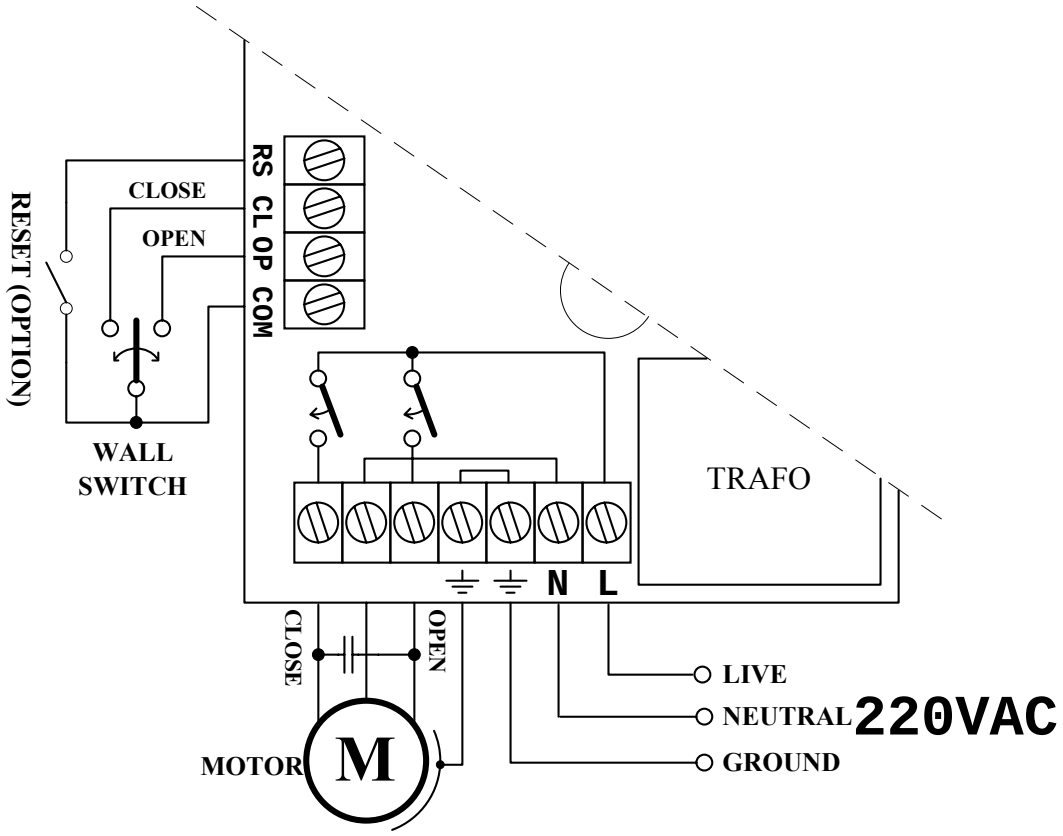
Notice! to obtain on/off (bi-stable) mode of operation of the receiver's relays the hand transmitter switch in point 2c above must be pressed twice in less than 2 second interval.

3. Programming - deleting all transmitters from the receiver's memory:

press receiver's **PRG** switch (led lights) for more than 8 seconds, until the receiver LED starts blinking confirming end of the procedure. Memory of the receiver is cleared.

Important! Procedures 2 and 3 can be performed with valid transmitter(s) in the receiver's memory.

ST wiring diagram::



Description of ST wiring connectors:

L - (mains supply connector) - LIVE wire mains supply 220-230VAC.
N - (mains supply connector) - NEUTRAL wire mains supply 220-230VAC.
⏚ - (mains supply connector) - ground wire of mains supply cable.
⏚ - (motor connector) - ground wire of roller motor cable.
OPEN - (motor connector) - LIVE wire of roller motor cable - open rotation.
middle -(motor connector) - NEUTRAL wire of roller motor cable.
CLOSE -(motor connector) - LIVE wire of roller motor cable - close rotation.

COM- (manual wall type pulse switch connector) - common (ground) point wire.
CL - (manual wall type pulse switch connector) - close rotation.
OP - (manual wall type pulse switch connector) - open rotation.
RS - reset connector for optional photo or infrared cell (NO type) valid in CLOSE rotation only.
Closing the photo cell inputs RS and COM while CLOSE motor rotation will result in:
- stopping the motor rotation (jumper FOTO user set to close), or
- stopping the motor rotation and switch to reverse rotation OPEN (jumper FOTO user set to open).

<u>WARNING! Under no circumstances points COM, CL, OP, RS may be connected to any voltage!!</u>

SPECIFICATIONS:
* ASK radio high security code-hopping receiver and two hand transmitter set,
* EC standard 433,92 MHz frequency with 12V miniature battery (ST100H) or 9V battery (ST200H),
* up to 100 meters (ST100H) or 200 meters (ST200H) operation range in open field,
* relays handling up to 16A/220-230V AC,
* in-built LED for programming indication,
* power supply 220/230VAC (controller and motor),
* up to 12 transmitters in standard set.

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